

# Taking Charge of Watersheds: The First Steps



WATERSHED MANAGEMENT

Notes 1

Environmental Management



*In addition to unsound upland farming practices and illegal logging, recent threats to watersheds include mining, resettlements, and housing subdivisions.*

## The Need to Protect Watersheds

Local governments and communities express ever-increasing concern with ensuring local water supply for drinking and irrigation. With the frequent occurrence of floods and water shortages, people have become aware of the importance of protecting their watersheds and maintaining forest cover.

A watershed is Mother Nature's water reservoir much like a city water supply system with its underground cistern, storage tanks, pumps, and distribution pipes. It is defined as "the total land area that contributes to the flow of a particular body of water (river, creek, or stream) and drains to a common outlet."

Local governments share with National Government the responsibility to protect and manage watersheds particularly in maintaining its forest cover. However, local governments who want to take charge face several constraints: a) reforestation requires huge budgets; b) local governments lack teeth to influence land use decisions by local user groups as well as national government-sponsored programs, e.g., resettlements, mining, etc.; and c) lack of knowledge on where to start and what tools to use.

Inspired by initial success of several local government units, this article and subsequent issues describe the basic steps for local governments to begin taking charge of watersheds.

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# Technology

## Key Processes

Taking charge of managing watersheds is an extremely challenging and complex process that requires a combination of appropriate technical skills and timely social interventions involving many stakeholders. Many local government units, however, are beginning to overcome these challenges. The following are recommended practices derived from those experiences.

- **Identify the watershed important to your community.** With the help of the local DENR or other technical organizations, identify the watershed important to the local government unit as source of water. This is done by physical inspection with the aid of a topographic map.

- **Know the features of your watershed.** Identify various landforms, land uses, drainage pattern, and legal classifications of land portions within the watershed. Identify and get

the views of stakeholders or groups of people who depend on the watershed such as upland farmers, water districts, and irrigators associations. Note that several local government units may be involved in one watershed.

- **Prepare a Local Watershed Action Program.** With the help of local leaders, resource persons, and a workshop facilitator, help all those concerned through a Planning Workshop to define common problems and courses of action acceptable to all to better protect and manage the watershed. Develop a program for both short-term and long-term “doable” actions.

- **The plan should treat upland communities as “Watershed Managers”.** It is now socially impossible to relocate forest occupants or upland farmers peacefully. What is feasible is to help upland communities apply more sustainable forest management and farming practices through tenure

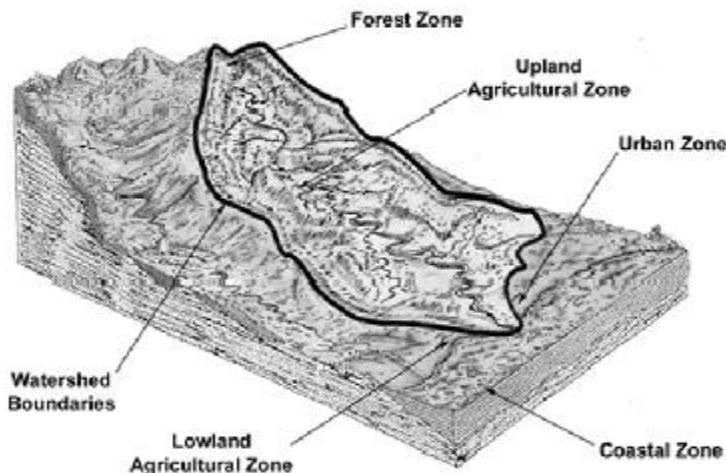
security and better farm support services.

- **Provide for enforcement mechanisms.** If the watershed is classified as part of the National Protected Area System, the local government and DENR may collaborate to establish or fully mobilize a multi-sectoral Protected Area Management Board or PAMB. Under the law, the PAMB will set the rules. If the area is not declared as a protected area, the local government can initiate the process to bring about the classification of the watershed as a “Community Watershed.”

- **Provide support to implementation.** Establish a multi-sectoral or an inter-local government organization for watershed management. Maintain the enthusiasm of such groups by sustaining your commitment to their plans and providing secretariat support.

## First Steps

1. Identify and delineate on the map the watershed important to your locality. Ask the regional or provincial DENR office to help delineate the watershed both on the topographic map and, if needed, on the ground.
2. Know your local “champions” among ongoing projects and upland farmer leaders within the watershed, and tap them for critical initial activities.
3. Interview upland farmers, determine what prevents them from planting more trees, and address such constraints.
4. Organize a planning team to rationalize available information and prepare for a consensus building process to better manage the watershed.



*What is a watershed? A watershed is the total land area that contributes to the flow of a river, stream, or creek. Its boundary can be located on the ground by connecting all the highest points of the area around the river, stream, or creek, where water starts to flow when there is rain. It is not man-made, and it does not follow political boundaries. In most cases, it includes several barangays, municipalities, and cities. A watershed may not have any vegetation or wildlife, or may not even be under DENR control. It does not have to be steeply sloping, and its river, stream, or creek does not need to be flowing continuously.*



## Policy and Practice

### Enabling Framework

The Local Government Code mandates local government units to protect their natural resources such as watersheds. Section 17 devolves management of small watersheds and community-based forest management (CBFM) programs to local government units.

Department of Environment and Natural Resources (DENR)–Department of Interior and Local Government (DILG) Circular 98-01 Series

of 1998 mandates specific steps for local government units to exercise control of watersheds important to them.

Executive Order 263 establishes the Community-Based Forest Management, a key National Government program for forest management. It empowers upland/forest communities to manage forests in collaboration with local government units and the DENR. In a way, it provides security

of tenure to upland farmers to encourage sound forest management and farming practices.

Republic Act No. 7586 or the National Integrated Protected Areas (NIPAS) Law places certain nationally important watersheds under the management of Protected Area Management Boards or PAMBs where affected local government units are expected to play a lead role.

### Practices That Are Working

In Nueva Vizcaya, the provincial government in coordination with the municipalities launched a collaborative program to manage the Barobbob watershed. Serving as the source of potable water and irrigation for the capital town, Barobbob watershed is subjected to conflicting views on how it will be used. It is a source of water for both the lowland farmers and upland communities for the maintenance of their farms within the watershed.

The provincial government found that by motivating resource-dependent communities to participate in resource management activities, it was a lot easier to organize them. First, security of tenure had to be granted to the upland farmers in order to start the whole process. However, this drew a negative reaction among lowland farmers who feared adverse effects to the already limited irrigation water flowing into their farms. Lowland farmers have, for a long time, come into open conflict with upland farmers regarding continuous water supply.

With the help of the Environment and Natural Resources Officer (ENRO), the tension was defused and compromise agreements were hammered out through a process that enabled the irrigators to acquire an appreciation of the management framework of the watershed.

Bringing all stakeholders into a participatory planning process, the provincial government, the DENR, and the community delineated the watershed. The physical situation was reviewed and decisions were made as to which portions of the watershed were to be devoted to reforestation where upland farmers would be encouraged to engage in conservation practices. The provincial government and the DENR agreed that the provincial government would issue Land Management Agreements to upland farmers.

The provincial government helps the upland community to engage in supplemental income generating pro-

gram to enable them to successfully carry out conservation practices. The Lowland Irrigators Association also voluntarily contributes to upland reforestation after appreciating the value of the program. The provincial government also reorganized the ENRO and established a resident ENRO unit within the watershed.

Since the start of the watershed management project in 1997, impact has been observed. There have been no forest fires, in spite of El Niño. No new entrants into the forest have come. In the last elections, the governor won by a landslide among the voters in the watershed communities.



*Supporting upland farmers' goals can enhance sustainable watershed protection as demonstrated in Barobbob watershed in Nueva Vizcaya.*





# LGU Action Agenda

## Other Initiatives

In **Maasin, Iloilo**, it was the flashfloods that brought home the message, loud and clear: Save the Maasin Watershed. The provincial government promptly established the Maasin Watershed Task Force, a multi-sectoral group that included the provincial and city governments, three municipal governments, DENR, media, nongovernmental organizations, civic clubs, a few corporations, and educational institutions. Focusing on the 6,000-hectare watershed, the Task Force initiated the “Alay Tanim” program that designated specific areas for particular groups or organizations to reforest and protect.

As added incentive, a stewardship agreement was reached with selected residents in the area who were to help enforce regulations protecting the trees and conserving other forest products. The Task Force also made sure that farmers who used to depend on the forest had alternative jobs and had access to agro-forestry-based livelihood projects.

**Pilar, Bohol** is another example where watershed management succeeded. Before the Rehabilitation Project, the denuded basin drained into a dam that was to supply water for the irrigation project then being constructed. Challenged in 1993 by

no less than the President of the Philippines to rehabilitate the denuded basin in this municipality, the mayor promptly launched the Pilar Integrated Watershed Rehabilitation and Development Project. The mayor enlisted the support of key line agencies and volunteers from six barangays. The project engaged in tree planting, establishment and maintenance of firebreaks, and cleaning of a forest plantation within the watershed, among others. Today, other local governments as well as public and private agencies study the Pilar experience and its replicability.

## Resources and References

### Other Exemplary LGU Programs

The **Galing Pook Awards Program** identified several exemplary local government programs on watershed and forest management that are worth studying and visiting. Three of which are:

- Saving the Busol Watershed, Baguio City *Contact Person:* Ramon S. Dacawi, Public Information Office, Office of the Mayor, Baguio City Tel. (074) 442-2502
- Saving the Marikina River, Marikina City *Contact Person:* Mayor Bayani Fernando, Marikina Municipal Hall, Marikina, Metro Manila. Tel. (02) 948-0251, fax (02) 947-5277
- ENR “Balik Ilahas” Program, Negros Occidental

*Contact Person:* Gov. Rafael L. Coscolluela; Executive Assistant IV Mr. Julie P. Aldeguer, Action Officer, Task Force Ilahas, Office of the Governor, Provincial Administration Center, North Capitol Road, Bacolod City. Tel (034) 255-64, 203-13, 230-24; Fax (034) 203-13, 433-3488.

### LGU Programs Cited In This Article

- **Barobbob Watershed:** Gov. Rodolfo Agbayani; Provincial Administrator Virgilio Tiongson, Bayombong Nueva Vizcaya.
- **Maasin Watershed:** Gov. Arthur Defensor, tel. (033) 337-1739, fax (033) 337-4230. Galing Pook Awardee.
- **Pilar:** Mayor Leonardo Mendez, Municipality of Pilar, Bohol. Tele-fax (038) 411-3300.

### Selected Technical Resource Organizations

- The **Forest Management Sector (FMS)** of local **DENR** offices can provide information on policies and legal status of land.
- **Environmental Science for Social Change (ESSC)** of Ateneo de Manila University, Quezon City provides excellent GIS and community mapping technical assistance to localized groups working on watershed and forest management.
- **Water Resources Center**, University of San Carlos, Talamban, Cebu City provides expert advice on water supply systems assessment and project development.
- **National Coalition of Watersheds** is a young organization of 26 multi-sectoral teams sharing experience from selected watersheds nationwide. <http://www.watershed.org.ph>.